PIP-II Teamcenter / Engineering Manual Survey

August 2015

Introduction:

PIP-II management made the decision in March 2014 to implement Teamcenter for engineering document management. Since that decision implementation has proceeded unevenly, both due to significant push-back from the engineering and scientific staff, and from a number of technical issues that accompanied the roll-out of Teamcenter software. In response, PIP-II management developed a survey to assess experiences in utilizing Teamcenter in support of PIP-II and to explore views on how Teamcenter supports the processes and procedures outlined in the Fermilab Engineering Manual. The purpose of the survey was to collect information that would allow management to improve the effectiveness of Teamcenter as an electronic document management system for PIP-II.

The survey was sent to all senior management and Level 3 managers on PIP-II – approximately 30 people in total. This paper summarizes the responses of the 14 PIP-II personnel who responded[SDHx01].

Who was surveyed?

The respondents were a mixture of scientists and engineers who have been using Teamcenter; some more than others.

Scientist: 5; Electrical Engineers: 2; Mechanical Engineers: 4; Civil Engineers: 1; Finance Manager: 1

The respondents were a mixture of Mac and PC users. The Teamcenter software being used was a mixture of local install vs. Citrix.

10 PC, 6 Mac; 7 Local Installs, 10 Citrix (Note: some people use both platforms)

The Engineering Manual:

As expected, the scientific community does not utilize the engineering manual. All of the mechanical engineers (4) and the civil engineer said that they use the engineering manual to some extent while the 2 electrical engineers said that they do not use the engineering manual at all. The Engineering Manual is mostly used to help create Risk Assessments and to identify which reviews are required.

Using Teamcenter:

Many of the PIP-II respondents said that they now use Teamcenter for storing their documents but they also responded that they use SharePoint and Docdb for some items. Due to PIP-II requirements, financial, budgetary, FRS, and reviews and approvals must be completed in Teamcenter so some compliance was expected. However, most engineering documents are still not being managed within Teamcenter.

Searching for documents and performing workflows seem to cause the most problems for the PIP-II Teamcenter Users[SDHx02].

About half of the Users surveyed are using Citrix as the access point into Teamcenter.

Out of these Citrix Users, 75% reported that they were not having serious problems with Citrix and that the helpdesk provided good service when they did have issues.

Training:

Teamcenter training has been provided to all PIP-II staff through classroom sessions and online videos. Most respondents said that they prefer PDF materials for their training needs. About half of the respondents also said that they like some video training materials but that they also like tinkering with the software as a training process – this might be why learning this software might not be going well! Only 3 people said that they also like a classroom environment for learning.

Document Applicability:

The survey asked for opinions on what classes of documents would most appropriately be managed within Teamcenter versus somewhere else (e.g. docdb, Sharepoint, servers). Note: It is the opinion of PIP-II management that all documentation associated with processes described in the Engineering Manual should be maintained in Teamcenter.

Opinions on types of documents that should be managed within Teamcenter:

There seems to be some consensus on maintaining the following in TC

- Engineering Drawings
- Functional and Technical Requirements Specifications (FRS and TRS)
- Engineering procedures
- Any document requiring revision control
- Engineering notes and analysis
- Design reviews
- Risk assessments
- Systems integration plans
- Any document associated with engineering requirements and processes
- There were some suggestions of maintaining financial reports, RDR and CDR, and change request in TC, but this did not seem to be the majority view

Opinions on types of documents that should be managed outside of Teamcenter:

There seems to be some consensus on maintaining the following outside of TC

- Presentations and talks
- Operations documents (e.g. elog)
- Financial forms, request, and reports
- Schedule information
- RDR and CDR
- Accelerator Physics notes and calculations
- Meeting minutes
- There were some suggestions of maintaining FRS and TRS outside of TC, but this did not seem to be the majority view

Here is a list of additional comments:

Specific comments for improvement are given below. In general these refer to:

- A more intuitive user interface
- More intuitive search tools
- An ability to access documents (read only) from outside TC
- More thorough user documentation

Specifics:

Is there an alternate GUI? Even if it only did google-like search and read-only document access, that would already be a big help. If read-only access could be granted without an account (or with a generic login, like the doc DB), it would be helpful with off-site collaborations; If we could make searching and initiating workflows more intuitive I think people would adapt more quickly. I also believe we could benefit from a dedicated "facilitator" who would be available for assistance and would make sure all required PIP-II engineering documentation is correctly captured and readily accessible via Teamcenter; Project-specific sub-sites; Make it more user friendly; acceptance throughout the PIP-II community, people learning at least the fundamentals of authoring, editing, approving, and revising written engineering documents.; If the program were more intuitive, people would flock to it. Doesn't google have something to replace Teamcenter? Those guys know how to produce software that works and is easy to use; I am not sure… Most of us should be able to get used to it. Improvements that I have indicated before would help (e.g.: simpler, more intuitive interface); I would like more thorough documentation, so that I can work through issues I run across on my own. Also, I would like to see more effort put into making the system more robust to users.